VOLUME XI

INDEX OF SUBJECTS AND AUTHORS

Only the main topics are listed, and reference is given to the first page of each paper in which they are discussed

Anderson, E. S., 119
Antibody production, genetic control and isoimmune antibodies in cattle twins, 271
Ascobolus immersus, postmeiotic segregation at locus *46*, 311
Assortative mating, selection under, in mouse, 171

Bacillus subtilis, spontaneous transformation in, 83
Bacteriophage, extent of *rII* deletions in T4, 215
Baker, L. H., 105
Barigozzi, C., 141
Beckert, William H., 209
Biondini, Patricia, E., 171
Bratosin, S., 113
Bufo regularis, twenty chromosomes in, 209
Butler, Jane M., 193

Calcium metabolism in grey–lethal mouse, 7
Cannings, C., 289
Centromeres, position of, in linkage groups II and IX in mouse, 193
Chai, C. K., 239
Chick, correlated responses in reproductive fitness to selection, 221
Chloramphenicol, mapping of a resistant mutation in *Escherichia coli* K 12, 97
Chovnick, A., 51
Chromosomal and extrachromosomal transmission of cellular melanization in *Drosophila melanogaster*, 141
Chromosomes, twenty in *Bufo regularis*, 209
Crossing over, non-homologous and triplications in *Drosophila melanogaster*, 201
Curnow, R. N., 105

Dawidowicz, A., 311
Day, A. W., 63
Deletions, extent of in *rII*, in T4, 215
de Ligny, Wilhelmina, 179
Diploids, production and characterization in *Ustilago violacea*, 63
Donch, John, 183
Dosage compensation as a developmental phenomenon, in *Drosophila*, 115
Dove, William F., 215
Doyle, Brother Walter, 209
Drosophila
  dosage compensation as a developmental phenomenon, 115
  effects of nutritional deficiencies on *maroon-like* maternal effect, 51
  frequency dependence of mating success, 135
  transmission of cellular melanization in *Freckled* (*Frd*) phenotype, 141
  triplications and problems of non-homologous crossing over, 201
  variation of scutellar bristles in, 125
Drug resistance,
  genetic analysis of some mutations to, (tetracycline) in *Escherichia coli*, 303
  in *Eudorina elegans*, 21
  in *Saccharomyces cerevisiae*, 33
  mapping of a chloramphenicol resistance mutant in *Escherichia coli*, 97
  on transferable determinant in *Salmonella typhimurium*, 119
Dudzinska, B., 311
Duguid, J. P., 151

Eel, detection of haemoglobin and esterase polymorphism, 319
Eggertsson, G., 15
Ehrman, Lee, 135
Ephrati-Elizur, Erela, 83
Escherichia coli
  genetic analysis of some mutations causing resistance to tetracycline, 303
  loci of radiation sensitivity in Bs strains, 183
  mapping of a mutation to chloramphenicol resistance, 97
  mapping of *ochre* suppressors, 215
Esterase, detection of polymorphisms in Atlantic eel, 319
Eudorina elegans, genetic studies, 21

Fertility differences between homogamous and heterogamous matings, 289
Franker, Colin K., 1
Friend mouse leukemia virus, susceptibility to, 1

Gajewski, W., 311
Gorla, M. Sari, 141
Greenberg, Joseph, 183
Growth, effects of inbreeding on, in mouse, 43

Haemoglobin, detection of polymorphisms in Atlantic eel, 319
Hamster, interspecific reciprocal hybrids, 113
Haverland, L. H., 171
Hybrids, interspecific reciprocal in *Mesocricetus*, 113

Inbreeding, effect on birth weight and foetal and placental growth, 43
Inherited susceptibility to Friend virus, 1

Jones, Christine M., 119
Jones, J. K., 63

Kelemen, Marianne V., 119
Kemp, Richard, 193
Kimura, Motoo, 247

Lee, G. L., 115
Lyon, Mary F., 193

McCarthy, J. C., 43
MacDonald, K. D., 327
Maternal effect on *maroon-like* mutant of *Drosophila*, 51
Mating, dependence of success on frequency, in *Drosophila pseudoobscura*, 135
Mating-type alleles in Illinois strains of *Tetrahymena pyriformis*, syngen 1; 211
Melanization, chromosomal and extra-chromosomal transmission of cellular, in *Freckled Drosophila melanogaster*, 141
Mishra, N. C., 21
Mitochondria, inhibition of synthesis by erythromycin, and resistance factors in *Saccharomyces cerevisiae*, 33
Morgenroth, A., 151
Mouse
  analysis of quantitative inheritance of body size, 239
  calcium and phosphorus metabolism, in grey–lethal, 7
  inbreeding effects on birth weight and foetal and placental growth, 43
  inherited susceptibility to Friend virus, 1
  position of centromeres in linkage groups II and IX, 193
  selection under assortative mating, 171
Murphy, Helen M., 7
Mutations, theory of occurrence of neutral or nearly neutral mutations, 247

Non-chromosomal and chromosomal drug resistance in, *Eudorina elegans*, 21, and *Saccharomyces cerevisiae*, 33
Nordskog, A. W., 221
Nystatin, selection of auxotrophs with, in *Penicillium chrysogenum*, 327

Ochre suppressors, mapping of in *Escherichia coli*, 15
Ox, genetic control of antibody production, 271

Pantelouris, E. M., 319
Parasexual cycles in *Ustilago violacea*, 63
Paszewski, A., 311
Payne, R. H., 319
Penicillium chrysogenum, selection of auxotrophs with nystatin, 327
Phillips, Ruth Brosi, 211
Phosphorus metabolism in grey–lethal mouse, 7
Pitton, J-S., 119
Plasma esterases, polymorphisms in flounder and plaice, 179
Polygenes and body size in mouse, 239
Polymorphism of plasma esterases in flounder and plaice, 179
Postmeiotic segregation at locus *46* in *Ascobus immersus*, 311

Quantitative inheritance of body size in mouse, 239
Quilligan, J. J. Jr., 1

Radiation loci of sensitivity in Bs strains of *Escherichia coli*, 183
Raicu, P., 113
Reeve, E. C. R., 97, 303
Rendel, J., 271
Reproductive fitness, correlated responses to selection in chicks, 221
Rhamnose, differential mutational sites in *Salmonella typhimurium*, 151

Saccharomyces cerevisiae, inhibition of mitochondria synthesis by erythromycin, 33
Salmonella typhimurium
  an essay on bacterial archeology, 151
  associated resistance to two drugs on a transferable determinant, 119
Sang, J. H., 51
Scowcroft, W. R., 125
Scutellar bristles, variation of, in *Drosophila*, 125
Selection
  correlated responses in reproductive fitness in chick, 221

Selection (*cont.*)
effect of repeated cycles in populations of finite size, 105
for scutellar microchaetae in *Drosophila*, 125
of auxotrophs by nystatin in *Penicillium chrysogenum*, 327
under assortative mating in mouse, 171
Sellei, J., 271
Slizynska, H., 201
Susceptibility to Friend virus (FV), 1
Sutherland, T. M., 171
Suttie, D. R., 97

Tetracycline, genetic analysis of resistance to, in *Escherichia coli*, 303
Tetrahymena pyriformis, mating-type alleles in Illinois strains of syngen 1, 211
Thomas, D. Y., 33
Threlkeld, S. F. H., 21
Transformation, spontaneous in *Bacillus subtilis*, 83
Triplications and the problems of non-homologous crossing over in, *Drosophila melanogaster*, 207
Twins, isoimmune antibodies in cattle, 271

Ustilago violacea production and characteristics of diploids, 63

Variation, and the mutational production of neutral or nearly neutral isoalleles, 247
Verghese, Margrith Wehrli, 221

Wilkie, D., 33

GENETICAL RESEARCH

EDITORIAL BOARD

C. H. WADDINGTON (*Chairman*)
CHARLOTTE AUERBACH D. LEWIS
H. GRÜNEBERG G. PONTECORVO
W. HAYES A. ROBERTSON

EXECUTIVE EDITOR

E. C. R. REEVE

ASSISTANT EXECUTIVE EDITOR

J. O. BISHOP

Volume 11. 1968

CAMBRIDGE
AT THE UNIVERSITY PRESS
1968

PUBLISHED BY
THE SYNDICS OF THE UNIVERSITY PRESS
Bentley House, 200 Euston Road, London, N.W. 1
American Branch: 32 East 57th Street, New York, N.Y. 10022

Printed in Great Britain at the University Printing House, Cambridge

CONTENTS

No. 1 (February 1968)

FRANKER, COLIN K. and QUILLIGAN, J. J., JR. Further studies on inherited susceptibility to Friend mouse leukemia virus *page* 1

MURPHY, HELEN M. Calcium and phosphorus metabolism in the grey–lethal mouse 7

EGGERTSSON, GUDMUNDUR. Mapping of *ochre* suppressors in *Escherichia coli* 15

MISHRA, NAWIN C. and THRELKELD, S. F. H. Genetic studies in *Eudorina* 21

THOMAS, D. Y. and WILKIE, D. Inhibition of mitochondrial synthesis in yeast by erythromycin: cytoplasmic and nuclear factors controlling resistance 33

MCCARTHY, J. C. The effects of inbreeding on birth weight and foetal and placental growth in mice 43

CHOVNICK, A. and SANG, J. H. The effects of nutritional deficiencies on the *maroon-like* maternal effect in Drosophila 51

DAY, A. W. and JONES, J. K. The production and characteristics of diploids in *Ustilago violacea* 63

EPHRATI-ELIZUR, ERELA. Spontaneous transformation in *Bacillus subtilis* 83

REEVE, E. C. R. and SUTTIE, D. R. Chromosomal location of a mutation causing chloramphenicol resistance in *Escherichia coli* K12 97

CURNOW, R. N. and BAKER, L. H. The effect of repeated cycles of selection and regeneration in populations of finite size 105

RAICU, P. and BRATOSIN, S. Interspecific reciprocal hybrids between *Mesocricetus auratus* and *M. newtoni* 113

LEE, GEOFFREY L. Dosage compensation as a developmental phenomenon in *Drosophila* 115

ANDERSON, E. S., KELEMEN, MARIANNE V., JONES, CHRISTINE M. and PITTON, J.-S. Study of the association of resistance to two drugs in a transferable determinant in *Salmonella typhimurium* 119

No. 2 (April 1968)

SCOWCROFT, W. R. Variation of scutellar bristles in *Drosophila*. XI. Selection for scutellar microchaetae and the correlated response of scutellar bristles 125

EHRMAN, LEE. Frequency dependence of mating success in *Drosophila pseudoobscura* 135

BARIGOZZI, C. and GORLA, M. SARI. Chromosomal and extrachromosomal transmission of cellular melanization in the Freckled phenotype in *Drosophila melanogaster* 141

MORGENROTH, A. and DUGUID, J. P. Demonstration of different mutational sites controlling rhamnose fermentation in FIRN and non-FIRN rha⁻ strains of *Salmonella typhimurium*: an essay in bacterial archaeology *page* 151

SUTHERLAND, T. M., BIONDINI, PATRICIA E. and HAVERLAND, L. H. Selection under assortative mating in mice 171

DE LIGNY, WILHELMINA. Polymorphism of plasma esterases in flounder and plaice 179

DONCH, JOHN and GREENBURG, JOSEPH. Loci of radiation sensitivity in Bs strains of *Escherichia coli* 183

LYON, MARY F., BUTLER, JANE M. and KEMP, RICHARD. The positions of the centromeres in linkage groups II and IX of the mouse 193

SLIZYNSKA, H. Triplications and the problem of non-homologous crossing-over 201

BECKERT, WILLIAM H. and DOYLE, BROTHER WALTER. *Bufo regularis*, a twenty-chromosome toad 209

PHILLIPS, RUTH BROSI. Mating-type alleles in Illinois strains of *Tetrahymena pyriformis*, syngen 1 211

DOVE, WILLIAM F. The extent of *r*II deletions in phage T4 215

No. 3 (June 1968)

VERGHESE, MARGRITH WEHRLI and NORDSKOG, A. W. Correlated responses in reproductive fitness to selection in chickens 221

CHAI, C. K. Analysis of quantitative inheritance of body size in mice. V. Effects of small numbers of polygenes on similar genetic backgrounds 239

KIMURA, MOTOO. Genetic variability maintained in a finite population due to mutational production of neutral and nearly neutral isoalleles 247

SELLEI, J. and RENDEL, J. The genetic control of antibody production. A study of isoimmune antibodies in cattle twins 271

CANNINGS, C. Fertility differences between homogamous and heterogamous matings 289

REEVE, E. C. R. Genetic analysis of some mutations causing resistance to tetracycline in *Escherichia coli* K12 303

GAJEWSKI, W., PASZEWSKI, A., DAWIDOWICZ, A. and DUDZIŃSKA, B. Postmeiotic segregation in locus '*46*' of *Ascobolus immersus* 311

PANTELOURIS, E. M. and PAYNE, R. H. Genetic variation in the eel I. The detection of haemoglobin and esterase polymorphisms 319

MACDONALD, K. D. The selection of auxotrophs of *Penicillium chrysogenum* with nystatin 327

Index of subjects and authors 331

VOLUME XII

INDEX OF SUBJECTS AND AUTHORS

Only main topics are listed, and reference is given to the first page of each paper in which they are described

Abbondandola, A., 45
Ahmad, Majeed, 103
Anderson, Wyatt W., 317
Aspergillus niger, growth rate, haploidization in and *p*-fluorophenylalanine, 305
Ayling, P. D., 341

Baker, E. P., 11
Boman, Hans G., 157, 169
Bonatti, S., 45
Barker, J. S. F., 237, 249, 267

Chapman, Victor, 199
Chater, K. F., 341
Chimerism, different types and autosomal gene localization by, 91
Chlorophyll abnormalities in hexaploid wheat, cytogenetic studies, 11
Chromosome pairing and crossing over in Maize, 21
Coadaption, further evidence for in *Drosophila pseudoobscura*, 317
Control of DNA specificity in *Pseudomonas aeruginosa*, 99
Cotton, cytogenetic studies of marker genes and chromosome deficiencies, 295
Cox, B. S., 187
Crossing over and chromosome pairing in Maize, 21
Cytogenetic studies,
  chlorophyll abnormalities in hexaploid wheat, 11
  marker genes and chromosome deficiencies in cotton, 295

Dacus oleae, genetics of two adult esterases, 1
Dawson, G. W. P., 355
Dee, Jennifer, 71
DNA/DNA annealing, the comparison of closely related rodents, 117
Donch, John, 55
Drosophila,
  coadaption, evidence for in crosses between geographic populations, 317
  effects of population size and selection intensity on selection for quantitative characters, 237, 249, 267
  formaldehyde and X-rays as mutagens of *Y* chromosome, 65
  genetics of Xasta (*Xa*) mutant, 285
  introduction of genetic material from inferior to superior strains, 221
  progeny: sperm ratios and non-functional sperm, 359

Endonuclease-deficient strain of *Ustilago maydis*, 95
Endrizzi, J. E., 295
Eriksson-Grennberg, Kerstin G., 147, 157, 169
Escherichia coli,
  Amp A ampicillin resistance locus, 147
  Amp B locus affecting resistance to ampicillin and chloramphenicol, 157
  genetic studies of strain Bs8, 55
  multistep transduction of tryptophan genes, 81
  mutants resistant to 100 μg/ml. D,L-Ampicillin, 169
Esterases, genetics of in *Dacus oleae*, 1

p-fluorophenylalanine, effect on growth and haploidization in *Aspergillus niger*, 305
Formaldehyde as mutagen of *Y* chromosomes in *Drosophila melanogaster*, 65
Fowler, G. L., 359
Frankham, R., 237, 249, 267

Gratia, J. P., 81
Greenberg, J., 55
Growth rate, effect of *p*-fluorophenylalanine on, in *Aspergillus niger*, 305
Guglielminetti, R., 45

Halliwell, R. E., 95
Haploidization, effect of *p*-fluorophenylalanine on in *Aspergillus niger*, 305
Hendler, Sheldon, 103
Hetherington, C. M., 285
Holliday, R., 95
Holloway, B. W., 99
Hossain, M. A., 285
Howe, T. G. B., 355

Inhibition of revertants to proline independence in *Salmonella typhimurium*, 355

Johnson, Roy, 199
Jones, L. P., 237, 249, 267
Jurand, Artur, 331

Krimbas, C. B., 1

Linkage group ($N\ Lc_1\ yg_2\ R_2$) in cotton, 295
Lhoas, Pol., 305
Loprieno, N., 45
Loutit, J. S., 29, 37, 139

Maguire, Marjorie P., 21
Maize, triplication, crossing over and chromosome pairing in, 21
Marinus, M. G., 29, 37, 139
Matsson, Eva, 169
Mating system of *Pseudomonas aeruginosa*, 29, 37, 139
Methionine genes, sequence in *Salmonella typhimurium*, 341
McIntosh, R. A., 11
McLaren, Anne, 117
Morris, T., 125
Mouse, XO and YO chromosome constitutions, 125
Mozmadar, A., 103
Mutant Xasta (*Xa*) in *Drosophila melanogaster*, 285

Neurospora crassa a new locus in tryptophan pathway, 103
Nitrous acid induced genetic instability in *Schizosaccharomyces pombe*, 45
Nördstrom, Kurt, 157
Normark, Staffan, 169

Olive fruit fly, genetics of adult esterases, 1
Osman, H. El Sayed, 221

Paramecium aurelia, relation between virus-like particles and R-bodies, 331
Parry, James M., 187
Pearce, L. E., 29, 139
Peat, W. E., 285
Photoreactivation and dark holding, effects on UV-induced mitotic recombination in *Saccharomyces cerevisiae*, 187
Physarum polycephalum, segregation of factors controlling fusion of plasmodia, 71
Population size and selection intensity in artificial selection, 237, 249, 267
Poulter, R. T. M., 71
Preer, John R., Jr., 331
Progeny: sperm ratios and non-functional sperm in *Drosophila melanogaster*, 359
Proline revertants, inhibition of in *Salmonella typhimurium*, 355
Pseudomonas aeruginosa,
  genetic control of DNA specificity, 99
  mating system in strain 1, 29, 37, 139

Ratnayake, Winston E., 65
R-bodies, relation to virus-like particles, in *Paramecium aurelia*, 331
Recombination, UV induced mitotic and effects of photoreactivation and dark holding in *Saccharomyces cerevisiae*, 187
Regulation of meiotic synapsis and the incorporation of alien disease resistance in wheat, 199
Resistance to penicillins in *Escherichia coli*, 147, 157, 169
  incorporation of alien disease resistance in wheat, 199
R-factors and effect of *Amp B* on, in *Escherichia coli*, 157
Riley, Ralph, 199
Robertson, Alan, 221
Rodents, comparison of close relatives by DNA/DNA annealing, 117
Rolfe, B., 99

Saccharomyces cerevisiae, UV-induced mitotic recombination, 187
Salmonella typhimurium,
  phage enhanced suppression of growth, of revertants, 355
  sequence of methionine genes, 341
Schizosaccharomyces pombe, genetic instability induced by nitrous acid, 45
Selection
  effects of population size and intensity in *Drosophila melanogaster*, 237, 249, 267
  introduction of genetic material from inferior to superior strains, 221
Slime mould, segregation of factors for plasmodium fusion, 71
Stewart, J. S. S., 91

Taylor, T., 295
Transduction, multistep of *try* genes of *Escherichia coli*, 81
Triplication and crossing over in maize, 21
Tryptophan, new locus in *Neurospora crassa*, 103
Tsakas, S., 1

Ustilago maydis an endonuclease-deficient strain, 95

UV sensitive strain Bs8 of *Escherichia coli*, 55

Virus-like particles and R-bodies in *Paramecium aurelia*, 331

Walker, P. M. B., 117
Wheat,
  analysis of chlorophyll abnormalities in hexaploid wheat, 11
  incorporation of alien disease resistance, 199
Whittington, W. J., 285

Xasta (*Xa*) mutant in *Drosophila melanogaster*, 285
X-rays as mutagen of *Y* chromosome of *Drosophila melanogaster*, 65

Y chromosome, tests for mutagenic effect on, in *Drosophila melanogaster*, 65

Zimmering, S., 359
Zouros, E., 1

GENETICAL RESEARCH

EDITORIAL BOARD

C. H. WADDINGTON (*Chairman*)

CHARLOTTE AUERBACH J. R. S. FINCHAM

W. HAYES MARY F. LYON

R. RILEY A. ROBERTSON

EXECUTIVE EDITOR

E. C. R. REEVE

ASSISTANT EXECUTIVE EDITOR

J. O. BISHOP

Volume 12. 1968

CAMBRIDGE

AT THE UNIVERSITY PRESS

1968

PUBLISHED BY
THE SYNDICS OF THE CAMBRIDGE UNIVERSITY PRESS
Bentley House, 200 Euston Road, London, N.W. 1
American Branch: 32 East 57th Street, New York, N.Y. 10022

Printed in Great Britain at the University Printing House, Cambridge

CONTENTS

No. 1 (August 1968)

ZOUROS, E., TSAKAS, S. and KRIMBAS, C. B. The genetics of *Dacus oleae*. II. The genetics of two adult esterases *page* 1

MCINTOSH, R. A. and BAKER, E. P. Cytogenetical studies in wheat. II. An analysis of chlorophyll abnormalities in hexaploid wheat 11

MAGUIRE, MARJORIE P. Chromosome pairing in altered constitutions and models of synapsis and crossing-over 21

LOUTIT, J. S., PEARCE, L. E. and MARINUS, M. G. Investigation of the mating system of *Pseudomonas aeruginosa* strain 1. I. Kinetic studies 29

LOUTIT, J. S. and MARINUS, M. G. Investigation of the mating system of *Pseudomonas aeruginosa* strain 1. II. Mapping of a number of early markers 37

LOPRIENO, N., ABBONDANDOLO, A., BONATTI, S. and GUGLIELMINETTI, R. Analysis of the genetic instability induced by nitrous acid in *Schizosaccharomyces pombe* 45

DONCH, JOHN and GREENBERG, JOSEPH. Genetic studies of strain Bs8 of *Escherichia coli* 55

RATNAYAKE, WINSTON E. Tests for an effect of the *Y*-chromosome on the mutagenic action of formaldehyde and X-rays in *Drosophila melanogaster* 65

POULTER, R. T. M. and DEE, JENNIFER. Segregation of factors controlling fusion between plasmodia of the true slime mould *Physarum polycephalum* 71

GRATIA, J. P. Multistep transduction of tryptophan (*trp*) genes in *Escherichia coli* 81

STEWART, JOHN S. S. Chimerism and genetic mapping 91

HOLLIDAY, R. and HALLIWELL, R. E. An endonuclease-deficient strain of *Ustilago maydis* 96

ROLFE, B. and HOLLOWAY, B. W. Genetic control of DNA specificity in *Pseudomonas aeruginosa* 99

No. 2 (October 1968)

AHMAD, MAJEED, MOZAMDAR, A. and HENDLER, S. A new locus in the tryptophan pathway of *Neurospora crassa* 103

MOLINA, A. M., CALEGARI, L. and CONTE, G. Modification by an R determinant for streptomycin of his^{sd} phenotype in a mutant strain of *Escherichia coli* B 109

McLaren, Anne and Walker, P. M. B. The comparison of closely related groups of rodents by DNA/DNA annealing *page* 117

Morris, T. The XO and OY chromosome constitutions in the mouse 125

Loutit, J. S., Marinus, M. G. and Pearce, L. E. Investigation of the mating system of *Pseudomonas aeruginosa* strain 1. III. Kinetic studies on the transfer of the sex factor (FP) 139

Eriksson-Grennberg, Kerstin G. Resistance of *Escherichia coli* to penicillins. II. An improved mapping of the *ampA* gene 147

Nordström, Kurt, Eriksson-Grennberg, Kerstin G. and Boman, Hans G. Resistance of *Escherichia coli* to penicillins. III. *AmpB*, a locus affecting episomally and chromosomally mediated resistance to ampicillin and chloramphenicol 157

Boman, Hans G., Eriksson-Grennberg, Kerstin G., Normark, Staffan and Matsson, Eva. Resistance of *Escherichia coli* to penicillins. IV. Genetic study of mutants resistant to D,L-ampicillin concentrations of 100 μg/ml 169

Parry, James M. and Cox, B. S. The effects of dark holding and photoreactivation on ultraviolet light-induced mitotic recombination and survival in yeast 187

Riley, Ralph, Chapman, Victor and Johnson, Roy. The incorporation of alien disease resistance in wheat by genetic interference with the regulation of meiotic chromosome synapsis 199

No. 3 (December 1968)

Osman, H. El Sayed and Robertson, Alan. The introduction of genetic material from inferior into superior strains 221

Frankham, R., Jones, L. P. and Barker, J. S. F. The effects of population size and selection intensity in selection for a quantitative character in *Drosophila*. I. Short-term response to selection 237

Jones, L. P., Frankham, R. and Parker, J. S. F. The effects of population size and selection intensity in selection for a quantitative character in *Drosophila*. II. Long-term response to selection 249

Frankham, R., Jones, L. P. and Barker, J. S. F. The effects of population size and selection intensity in selection for a quantitative character in *Drosophila*. III. Analyses of the lines 267

Hetherington, C. M., Whittington, W. J., Hossain, M. A. and Peat, W. E. The genetics of the *Xasta* mutant of *Drosophila melanogaster* 285

Endrizzi, J. E. and Taylor, T. Cytogenetic studies of $N\ Lc_1\ yg_2\ R_2$ marker genes and chromosomes deficiencies in cotton 295

LHOAS, POL. Growth rate and haploidization of *Aspergillus niger* on medium containing *p*-fluorophenylalanine *page* 305

ANDERSON, WYATT W. Further evidence for coadaptation in crosses between geographic populations of *Drosophila pseudoobscura* 317

PREER, JOHN R. JR. and JURAND, ARTUR. The relation between virus-like particles and R bodies of *Paramecium aurelia* 331

AYLING, P. D. and CHATER, K. F. The sequence of four structural and two regulatory methionine genes in the *Salmonella typhimurium* linkage map 341

HOWE, T. G. B. and DAWSON, G. W. P. Phage-enhanced suppression of the growth of revertants by auxotrophs in *Salmonella typhimurium* 355

ZIMMERING, S. and FOWLER, G. L. Progeny: sperm ratios and non-functional sperm in *Drosophila melanogaster* 359

Index of subjects and authors 365